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Title : Brucella serology of harbour porpoise *Phocoena phocoena* stranded and bycaught in Dutch waters (1995-2002)

Category : Medicine / Disease / Husbandry

Student : Not Applicable

Preferred Format : Poster Presentation

Abstract : In this study 70 harbour porpoises were tested using serum/blood and pericardial fluid. Other samples, e.g. milk, were used when available. Two indirect and a competitive ELISA were routinely performed using sera and pericardial fluid from marine mammals. A *B.melitensis* LPS antigen was used in an indirect and in the competitive ELISA, a *B.abortus* LPS antigen for the second indirect ELISA. All conjugates are horseradish peroxidase labelled, the indirect Elisa's use a protein A and the competitive ELISA a monoclonal anti M antibody. Diagnostic thresholds are set for marine mammals with uncertainty, but are based on experience gained from routine testing of a wide range of terrestrial species. Of 70 porpoises tested, 19 showed a titer (27.14 %). Statistical analysis revealed no significant difference (Chi-square test) in seropositivity between males and females. Seropositivity is, however, significantly higher in animals stranded (or bycaught) in Spring/Summer. Seasonal effects on seropositivity might be explained by increased transfer of the infection during the reproductive period. This could indicate that sexual activity may be a way of transmission of marine *Brucella* in porpoises, similar to *Brucella* infections in terrestrial mammals. Dutch porpoises show a low pregnancy rate, evidence of a high pollutant burden, and a high level of disease. Exposure to *Brucella* may have an additional negative influence on reproduction in this population.